

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for producing a single crystal with pulling the single crystal from a raw material melt in a chamber by Czochralski method, wherein when growing the single crystal, where a pulling rate is defined as V (mm/min) and a temperature gradient of the crystal in the direction of pulling axis at the vicinity of solid-liquid interface is defined as G ($^{\circ}$ C/mm) during growing a straight body of the single crystal, the temperature gradient G of the crystal is controlled by changing at least two or more of pulling conditions including a diameter of the straight body of the single crystal, a rotation rate of the single crystal during pulling the single crystal, a flow rate of an inert-gas introduced into the chamber, a position of a heater heating the raw material melt and a distance between a melt surface of the raw material melt and a heat insulating member provided in the chamber so as to oppose to the surface of the raw material melt, thereby V/G ($mm^2/^{\circ}$ C · min) which is a ratio of the pulling rate V and the temperature gradient G of the crystal is controlled so that a single crystal including a desired defect region is grown.

2. (Original) The method for producing a single crystal according to Claim 1, wherein the single crystal is pulled with keeping the pulling rate V constant.

3. (Currently Amended) The method for producing a single crystal according to Claim 1 or Claim 2, wherein V/G is controlled so that the defect region of the single crystal to be grown is N region over a whole plane in a radial direction.

Claims 4 - 7 canceled

8. (New) The method for producing a single crystal according to Claim 2, wherein V/G is controlled so that the defect region of the single crystal to be grown is N region over a whole plane in a radial direction.

9. (New) The method for producing a single crystal according to Claim 1, wherein at least two or more of the pulling conditions are changed automatically according to changing conditions obtained by performing an experiment beforehand.

10. (New) The method for producing a single crystal according to Claim 2, wherein at least two or more of the pulling conditions are changed automatically according to changing conditions obtained by performing an experiment beforehand.

11. (New) The method for producing a single crystal according to Claim 3, wherein at least two or more of the pulling conditions are changed automatically according to changing conditions obtained by performing an experiment beforehand.

12. (New) The method for producing a single crystal according to Claim 8, wherein at least two or more of the pulling conditions are changed automatically according to changing conditions obtained by performing an experiment beforehand.

13. (New) The method for producing a single crystal according to Claim 1, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

14. (New) The method for producing a single crystal according to Claim 2, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

15. (New) The method for producing a single crystal according to Claim 3, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

16. (New) The method for producing a single crystal according to Claim 8, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

17. (New) The method for producing a single crystal according to Claim 9, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

18. (New) The method for producing a single crystal according to Claim 10, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

19. The method for producing a single crystal according to Claim 11, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

20. (New) The method for producing a single crystal according to Claim 12, wherein the changing conditions that change at least two or more of the pulling conditions are adjusted among batches for producing the single crystal.

21. (New) The method for producing a single crystal according to Claim 1, wherein a silicon single crystal is pulled as the single crystal.

22. (New) The method for producing a single crystal according to Claim 2, wherein a silicon single crystal is pulled as the single crystal.

23. (New) A single crystal produced by the method for producing a single crystal according to Claim 1.

24. (New) A single crystal produced by the method for producing a single crystal according to Claim 2.